

Winning the battle against spruce budworm



Drew Carleton, the manager of forest health in the province, holds a display showing the lifecycle of the spruce budworm while he and his colleagues were in Campbellton Wednesday for an open house on the battle against the harmful insect.

Photo: Trevor McNally/The Tribune

Trevor McNally | The Tribune

The most recent fight against the damaging spruce budworm is being won, so says one of the people in charge of the battle.

Drew Carleton, the manager of forest health in the province, was one of more than a dozen in Campbellton on Feb. 19 to talk about the insect that wreaks havoc on trees in the province, particularly in northern New Brunswick.

"I am in charge of the section that reports the health of the forests in New Brunswick," he said. "We've been researching the budworm in New Brunswick since the early 1900s but it really took off in the 1950s. We've seen historical records of [the budworm] being around for thousands of years."

He said since the recent outbreak more than a decade ago, the province has taken the fight to the budworm.

"In terms of damage to trees in North America, the spruce budworm is the most impactful defoliator."

He said the bugs have a one-year life cycle. They wake up in late April to feed and by late July have grown to the moth stage where they mate and eggs are laid.

Huge swarms of budworm moths flew into northern New Brunswick two summers ago and about four years ago. These resembled a snowstorm in summer but lasted only a few hours as the moths flew from near the Matapedia area through Campbellton, following the Restigouche River.

“We just don’t know the exact how and why of why these swarms take place. There has to be a trigger within the colony itself and there needs to be the right environmental conditions,” said Carleton.

While the fight in New Brunswick has been effective in limiting the damage caused by the budworm and its decline in numbers, neighbouring Quebec has not been as successful. Carleton provided a graph showing the insect’s population and damage budworm has caused on the Gaspé Coast showing almost complete inundation. That same graph shows New Brunswick with very little population.

“It’s almost like they are respecting the provincial boundaries,” he said. “We got to work on this early intervention strategy in 2014-2015 concentrating on northern New Brunswick and it’s clearly had a huge effect.”

He said they spray, in a very light mist, BTK in areas where they have determined a decent sized colony of budworm. The insects eat it from the branches and die. He said the group also uses Tebufenozide which again the budworm eat. It messes up the insect’s hormones and causes it to moult too early. Both are used about the same amount and are equally as effective. Neither cause ill effects on humans “or any other mammals even at incredibly high exposure rates.”

“[Quebec] have 9.5 million hectares of mapped defoliation. Comparatively speaking, we have a total of 6.1 million hectares of forest in all of New Brunswick. Their goal is to treat about a half million hectares this season.”

He said that part of Quebec has the worst outbreak of budworm in Canada.

Carleton said that the research grant from the federal government totals \$75 million over four years but on a 60-40 split.

“We have a staff of about a dozen people who go out and get clippings to check for the spruce budworm larvae. But we have a great number of people in our five partnerships who are also sending in samples for us to check. Without those five partners we wouldn’t be nearly as successful in the battle against the budworm.”

Carleton said samples are taken from trees and checked for the two-millimetre-long larvae. While there is a downturn in budworm numbers in northern New Brunswick, he said that can change quickly.

“As you can tell from the number of graphs and the data we have, there is a massive population just over the border in Quebec so we need to keep on top of it.”